

THE ENVIRONMENTAL HOME

Evolving viruses a constant concern

By Dan Howard

for TRIB TOTAL MEDIA

It seems like a bad science fiction movie. You know the story. It starts with a new virus, bacteria, nasty chemical, whatever contaminant emerges from the bowels of Hollywood. We are told that "it" can't be stopped. At the edge of the demise of the human race, there is a heroic discovery by a scientist who is helped by the government agency security person. Together, they stop the evil perpetrator of the biological threat to all of humanity.

The truth is that we are fighting newly evolved viruses and bacteria. We live longer and survive with diseases and conditions that would have killed the last generation, only to leave patients with weakened immune systems vulnerable to new diseases. We need to protect these individuals when they return home or to the workplace.

One problem is that we have slowly been unwittingly been creating superbugs in the normal course of the practice of medicine. We may kill most of the bacteria or virus that made someone ill, and a couple of the little bugs survive. These stronger biological nightmares reproduce. Repeat treatment, repeat strongest bug survival and bingo.... bango pretty soon penicillin no longer saves the day.

Add to that the evolution of existing "bugs," some of these afflictions such as HIV or Ebola that first preyed upon our close genetic relatives like the monkey and then "came over" to mankind.

MRSA, C-diff, Hepatitis, Rotavirus, flu, Pneumonia, Meningitis and Strep Throat are some of the many diseases we face. Each of these can be brought into a home or workplace.

Who's most likely to be affected?

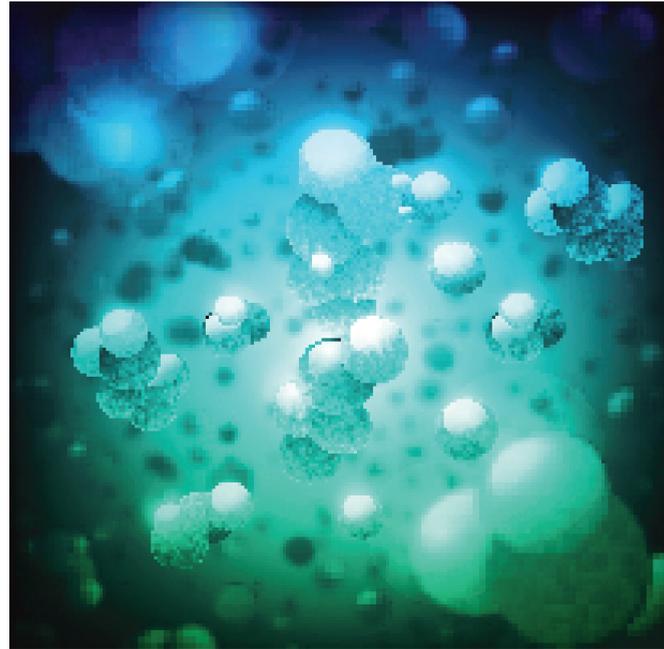
- Organ transplant recipients
- Chemotherapy patients
- Respiratory and cardiovascular patients
- Patients with health threatening injuries or illness
- Aging patients
- People with extreme stress
- Patients with open wounds
- Caretakers under stress

Combating the common disease transfer methods

Vectors: Traditionally in medicine, a vector is an organism that does not cause disease itself but spreads infection by conveying pathogens from one host to another. We need to eliminate at least one step in the way that the "vector" transfers disease to humans. As an example, if we are talking Zika, we can eliminate the mosquito insect, or eliminate the mosquito actually biting you. This could be by using proper clothing, repellants or area treatments. Pick the point that will most likely succeed. If you were having a wedding or sports event, you would treat the area around the event after eliminating standing water areas.

Consumption: A familiar example is a disease that is spread through contaminated food such as Listeria or E. coli.

We have the FDA (Food and Drug Administration) charges with the responsibility of checking our food supply. Most of the time,



they are successful. It still pays to not take risks such as undercooked meat consumption, and wash food such as vegetables before eating.

Air transfer: This is airborne transfer between living things. Masks are the best protection for these agents. In some cultures, the sick person has responsibility to wear masks to protect others from infection.

We need to teach proper hygiene when it comes to sneezing and coughing. If the sick person does not wear a mask, wear one yourself. Cleaning of HVAC and any other air-moving systems may be critical to preventing the continued recycling of illness in the home, public venue and workplace.

Touchpoints: Examples of

touchpoints include refrigerator or microwave handles, door knobs, railings, tops of chairs, bathroom fixtures, phones, kitchen appliances, laundry appliances, spigots, handles, remote controls, computers, tables, chair backs and arms, linens, stuffed animals, water fountains and all of your automobile touchpoints.

Clean all of the touchpoints with a disinfectant. There are numerous chemicals that are effective disinfectants. However, for some very serious exposures, there are particular disinfection products that must be used for effective cleaning. Professional services familiar with medical contaminations may be appropriate for serious contaminations or severely

compromised patients.

Extra protective steps

So now that you have had the bejeebers scared out of you, we need to look at what we can do to avoid these exposures. By the way, I never knew what a bejeeber was, but I know I never wanted to have one scared out of me.

- Consult with your medical professional to determine the highest potential exposure sources for the person that is at risk for disease

- Find professionals that understand housing science to evaluate risks and identify sources

- Do any required testing if possible to determine if actual exposures exist and need corrected

- Take action to reduce the exposure risk. The medical community calls this "avoidance." This is a great goal!

New technology

"Touchless Disinfection" is the new "hospital grade" answer to serious disease contagions. This name is not descriptive, so please let me describe the process.

Before this process is started, all of the touchpoints should be disinfected as a pre-treatment to extend the time that the treatment is effective.

A specialized fine mist spray equipment device is placed in each sealed room. The ultra-fine mist of hydrogen peroxide and silver nitrate penetrates into cracks and crevices

of the room and effectively kills the biological contaminants where they hide.

The advantage of this process is that it gets all of the surfaces. By comparison, human workers are usually not that effective. They will not effectively clean the edge of shelves or underside of a railing. The room must remain sealed and can't be entered for up to an hour until the end of the cycle. During that time, the peroxide product breaks down into harmless components.

Though originally designed and predominantly used in medical facilities, the health of a patient at home is as important as it is in a hospital room. Equipment to perform the treatment can be purchased, or the work can be done by trained professionals as a service. This is a new service and not available in all areas.

For links and additional information about disease control and disinfection, go to: www.PittsburghMoldTesting.com/diseasecontrol Resources for touchless disinfection services will be added as we locate them.

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